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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,619	09/15/2003	Hyun Jin Kim	0EKM-104792	9762

30764 7590 02/10/2006

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EXAMINER
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GORDON, RAEANN

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/662,619		KIM ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Raeann Gorden		3711	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41,48-57,61 and 62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41,48,49,51-54,57,61 and 62 is/are rejected.
- 7) ☒ Claim(s) 50 and 55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 51, 52, 56, and 57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 51 and 56, the specification does not support "mixtures thereof" for the peroxides/crosslinkers. Claims 52 and 57, the specification does not support a combination of peroxides.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22, 24-38, 40, 41, 48, 49, 51, 53, 54, 56, 61, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama (2001/0031669) in view of Hayashi et al (6,561,926). Regarding claims 1 and 41, Ohama discloses a golf ball core

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composition comprising 1,4-polybutadiene, peroxide (crosslinking agent), pentachlorothiophenol (peptizer) and 2-mercaptobenzothiazole (accelerator). Ohama broadly disclose the use of pentachlorothiophenols but does not disclose specific types such as metal salts or nonmetal salts. Hayashi teaches a golf ball comprising thiophenols and specifically teaches halogenated (nonmetal) thiophenols. Regarding claims 2-5, pentachlorothiophenol (peptizer) is present in the amount from 0.2 to 3.0 parts by weight. Regarding claims 6-9, 2-mercaptobenzothiazole (accelerator) is present in the amounts from 0.2 to 3.0 parts by weight. Regarding claims 10-12, peroxide (crosslinking agent) is present in the amount from 0.3 to 2 parts by weight. Regarding claim 13, the core composition is made from 1,4-polybutadiene. Regarding claims 14-17, the core composition includes filler such as zinc oxide and barium sulfate in the amounts from 5 to 30 parts by weight. Regarding claims 18 and 19, the core composition includes metal salts unsaturated carboxylic acid in the amount from 15 to 30 parts by weight. Regarding claim 20, the golf ball includes a core and cover, wherein the core is made from the composition (see above). Regarding claim 21, the core may include multiple layers, i.e. intermediate layer. Regarding claim 22, the state of the materials during manufacturing does not appear to affect the final product since the composition results a solid. Regarding claim 24, the golf ball includes a core, intermediate layer, and cover, wherein the core is made from the composition. Regarding claims 25-28, Ohama discloses a golf ball core composition comprising 1,4-polybutadiene, peroxide (crosslinking agent), pentachlorothiophenol (peptizer), and 2-mercaptobenzothiazole (accelerator). Peroxide (crosslinking agent) is present in the

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amount from 0.3 to 2 parts by weight. Pentachlorothiophenol (peptizer) and 2-mercaptobenzothiazole (accelerator) are present in combination from 0.2 to 3.0 parts by weight. Ohama broadly disclose the use of pentachlorothiophenols but does not disclose specific types such as metal salts or nonmetal salts. Hayashi teaches a golf ball comprising thiophenols and specifically teaches halogenated (nonmetal) thiophenols. Regarding claim 29, the core composition is made from 1,4-polybutadiene. Regarding claims 30-33, the core composition includes filler such as zinc oxide and barium sulfate in the amounts from 5 to 30 parts by weight. Regarding claims 34 and 35, the core composition includes metal salts unsaturated carboxylic acid in the amount from 15 to 30 parts by weight. Regarding claim 36, the golf ball includes a core and cover, wherein the core is made from the composition (see above). Regarding claim 37, the core may include multiple layers, i.e., intermediate layer. Regarding claim 38, the state of the materials during manufacturing does not appear to affect the final product since the composition results a solid. Regarding claim 40, the golf ball includes a core, intermediate layer, and cover, wherein the core is made from the composition. Regarding claims 48 and 53, the core composition includes metal salts unsaturated carboxylic acid. Regarding claims 49 and 54, the composition includes an organosulfur. Regarding claim 51 and 56, the composition includes dicumyl peroxide. Claims 58 and 59, Ohama discloses a golf ball comprising a composition including a polybutadiene, peroxide and 2-mercaptobenzothiazole. Regarding claims 61 and 62, Ohama discloses a golf ball core composition comprising 1,4-polybutadiene, peroxide (crosslinking agent), pentachlorothiophenol (peptizer), and 2-mercaptobenzothiazole (accelerator).

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Peroxide (crosslinking agent) is present in the amount from 0.3 to 2 parts by weight. pentachlorothiophenol (peptizer) and 2-mercaptobenzothiazole (accelerator) are present in combination from 0.2 to 3.0 parts by weight. Ohama broadly disclose the use of pentachlorothiophenols but does not disclose specific types such as metal salts or nonmetal salts. Hayashi teaches a golf ball comprising thiophenols and specifically teaches metal thiophenols such as zinc salts of pentachlorothiophenols. One of ordinary skill in the art would have modified Ohama in view of Hayashi to obtain the desired properties. Please note, Ohama clearly suggests the use of more than one organosulfur (refer to applicant's accelerator and peptizer).

Claims 23 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama (2001/0031669) in view of Hayashi et al (6,561,926), and further in view of Sullivan (2001/0000506). Ohama in view of Hayashi discloses the invention but does not disclose a wound layer. Sullivan teaches a golf ball comprising a solid or wound layer over the core. One of ordinary skill in the art would include wound layer for lower manufacturing costs.

#### ***Allowable Subject Matter***

Claims 50 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 11-23-05 have been fully considered but they are not persuasive. The 112 first paragraph rejection is maintained, the support shown by applicant is not persuasive. It is not clear from the specification that applicant intended to use more than one peroxide.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raeann Gorden whose telephone number is 571-272-4409. The examiner can normally be reached on Mon, Tues, Thurs, Fri 9-5.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene Kim can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rg  
February 5, 2006



**RAEANN GORDEN**  
**PRIMARY EXAMINER**